

# The Chemical Age

Index to Volume VIII. January-June, 1923

## A

Acids and Alkalis, Manufacture of: P. Parrish, 560  
Agriculture, Some Chemical Aspects of: E. Holmes, 80  
Air Compressors, Design of, 143  
Alcohol Fuel, 234  
Alexander, Sir Wm., on Trade Conditions, 59  
Alkali Industry, Centenary Celebrations of the, 421, 454  
Alkalis, Manufacture of Acids and: P. Parrish, 560.  
Alloys, The Structure of, 481  
Aluminium Chloride, Anhydrous, Storage of, 591  
America, Chemical Research in, 534  
American and Sicilian Sulphur, 542  
American Chemical Society's New President, 9  
American Dyestuffs Manufacture, 37  
American Fine Chemical Industry, 372  
American Institute of Chemistry, An, 210, 237  
Ammonium Nitrate, Explosibility of, 274  
Analytical Control in the Dyestuffs Industry, 255  
Apple Oil, Synthetic, Discovery, 43  
Armstrong, Dr. E. F.: Address at Cambridge, 666  
Arsenic in Cocoa, 38  
Arsenic, Detection of Small Quantities of, 10  
Arsenic Position in America, The, 62  
Ashes, Recovery of Fuel from, 638  
Associated Portland Cement Manufacturers, 428

## Authors—

ANDERSON, R. J.: Titanium, 331  
BARRY, T. Hedley: Modern Theories of Detergent Action, 446  
CHINA, F. J. E.: The "Premier" Mill in Chemical Industry, 329  
COWIE, G. A.: Notes on the Fertilising Effects of Potash, 85  
ELSDON, G. D.: The Analysis of Margarine, 450  
EUSTICE, Elaine: Recent Advances in Metallurgical Chemistry, 26  
FURNESS, Rex:  
Power Alcohol from Calcium Carbide, 280, 304  
Production and Uses of Lamp Black and of Carbon Black, 532  
GIBBS, W. E.: The Problem of Dust Explosions in Industry, 54, 92  
HOLMES, E.: Some Chemical Aspects of Agriculture, 80  
KNIBBS, N. V. S.: The Use of Lime in Agriculture, 88  
LEVY, Dr. Leonard: The Use of Breathing Appliances in Chemical Works, 362  
MYDDLETON, Dr. W. W.: Industrial Uses of Hydrogenated Oils, 448  
OOLVIE, ALEXANDER: Recent Developments in the Manufacture of Superphosphate, 600  
PARRISH, P.: Manufacture of Acids and Alkalis, 560  
The History of Vold Tower Sulphuric Acid Chambers, 692  
PICKLES, Alwyn: Experiments with a Growth-Impregnated Charcoal Catalyst, 166  
POTTER, F. M.: Methods of Costing in Chemical Works, 538, 612  
PRAGER, DR. H. A.: Recovery of Fuel from Ashes, 638

## Authors—continued

PRIDEAUX, Dr. E. B. R.: New Theories of Valency, 138  
SEYMOUR, Hartland: The Nitrogen Industry in the United States, 6  
SPIELMANN, Dr. Percy E.: The Growing Chemical Industry of Palestine, 114  
TANKARD, Arnold R.: The Influence of Science on Human Life, 390, 418  
WILLIAMSON, Dr. Sidney: The Present Position of Nitrogenous Fertilisers, 84

## B

Bayer Memorial Lecture, 536  
Beilby, Sir George, and Fuel Research, 649  
Benn Brothers, Ltd.: Ernest Benn, Ltd., 370  
Benzene and Naphthalene, Hydrogenation Products of, 486  
Benzol from Blast Furnace Gases, 460  
Benzol, Recovery and Rectification of, 348, 593  
Bio-Chemical Society, 35  
Birmingham Metallurgical Society, 235  
Bookman and Scientist, Treasures for the, 514  
Borax Consolidated, Ltd., 208  
Bradford Dyers' Association, 232  
Breathing Appliances in Chemical Works, The Use of: Dr. L. Levy, 362  
British Aluminium Co., 371  
British Association of Chemists, 535  
British Burmah Petroleum Co., Ltd., 15  
British Chemical Industry, Present Position of, 617  
British Chemical and Dyestuff Traders' Association, 508, 621  
British Chemical Progress since 1914, 259  
British Chemical Standard, New, 178  
British Chemical Standards Movement, 287  
British Colour Industry, The Future of the, 231  
British Fine Chemicals, Progress in, 167  
British Industries Fair, 31, 56, 116, 142, 193, 203, 227-230  
British Portland Cement Manufacturers, 371  
Brotherton, Sir E. A., on Trade Conditions, 58  
Brunner, Mond and Co., Ltd., 605, 671  
Butters Nitrate Process, The, 90  
"By-Product Coking," 595

## C

Calcium Carbide, Power Alcohol from: Rex Furness, 280, 304  
Canada, Chemical Industry in, 571  
Canada, Chemical Production in, 568  
Cancer from Paraffin and Tar, 514  
Carbon Black and Lamp Black, Production and Uses of: Rex Furness, 532  
Cast Iron, Research on Fundamental Properties of, 8  
Catalyst Poisoning, 233  
Centenary of the British Alkali Industry, 421

Centrifugal Force and Varnish Clarification, 261  
Charcoal Catalyst, Experiments with a Growth-Impregnated: A. Pickles, 166  
"Chemical Defence" in Russia, 662  
Chemical Engineering Catalog, The, 208  
Chemical Engineering Group, 168, 509  
Chemical Engineering Institute Seal, 262  
Chemical Industries of Russia, Position of the, 484  
Chemical Industry of Palestine: Dr. Percy E. Spielmann, 114  
Chemical Inspection, 206  
Chemical Laboratories, The Planning of, 310  
Chemical Plant, Recent Developments in, 34  
Chemical Research at Bangalore, 38  
Chemical Society, The, 148, 536  
Chemical Society of the University of Birmingham, 233, 285  
Chemical Trade in May, 641  
Chemical Trade and Industry Abroad, 336  
Chemical Warfare Problem, The, 121  
Chemicals and Fertilisers in Germany, 429  
Chemistry in War, The Place of, 288  
Chemists' Exhibition, The, 711  
Chlean v. Synthetic Nitrate, 208  
China Clay Brochure, A, 287  
"Climent Fondu," The Properties of, 539  
Clay, The Purification of, 57  
Coal Resources, Physical and Chemical Survey of, 679  
Coal Tar Dyes, 147  
Coke Oven Managers' Association, 121, 593  
Colloid Research Laboratory for Manchester, 250  
Colloids, Electric Charge of, 513  
Colour Identification, 307  
Colour Industry, British, The Future of the, 231  
Colour Makers, Training of, 434  
Colour Users' Association, Annual Meeting of, 670  
Colours, A System of Harmonising, 620

## Commercial Intelligence—

Ascott's Drug Stores: Bankruptcy Proceedings, 96  
Bishop, J. D. and Co., Ltd.: Voluntary Liquidation, 237  
Boots Cash Chemists (Western), Ltd.: Potassium carbonate, 414  
Brett, William: Sale of Foreign Medicines, 95  
Britannia Fertiliser Co., Ltd.: Compulsory Liquidation, 61  
Brown and Hall: Public Examination, 48  
Cesaris, Enea de: Bankruptcy Proceedings, 346  
Chemicals and By-Products, Ltd.: Meeting of Creditors, 120  
Coe, William W.: Bankruptcy Proceedings, 502  
Cumberland Coal Power and Chemicals, Ltd.: Voluntary Liquidation, 64  
Davidson and Lyell: Bankruptcy Proceedings, 188, 442  
Davis, Theophilus Morgan: Public Examination, 312  
Duroline Manufacturing Co., Ltd.: Voluntary Liquidation, 209  
Fine Chemicals, Ltd.: Meeting of Creditors, 312  
Ford, F., and Co.: Bankruptcy Proceedings, 235

## Commercial Intelligence—continued

Heyl, George Edward: Bankruptcy Proceedings, 525  
Hughes, Hugh Augustus: Discharge Suspended, 97  
Kelasto and Recelt Co., Ltd.: Meeting of Creditors, 429  
Kremers, A. T., Manufacturing Co., Ltd.: Compulsory Liquidation, 9  
Magadi Soda Co., 673  
Milton Manufacturing Co., The: Meeting of Creditors, 97  
Noble, W.: Public Examination, 123  
Norris, Alfred: Bankruptcy Proceedings, 178  
Parker and Lester, Ltd.: Meeting of Creditors, 123  
Pearson, Samuel Richard: Bankruptcy Proceedings, 37  
Powell, F. W.: Meeting of Creditors, 678  
Roller and Co., Ltd., J. M.: Voluntary Winding-up, 119  
Russell Oil and Chemical Co., Ltd.: Compulsory Liquidation, 569  
Sangley's Drug Stores: Bankruptcy Proceedings, 513  
Sapon Soaps, Ltd.: Liquidation of, 686  
Stone and Timson: Meeting of Creditors, 287  
Tomseloid Manufacturing Co., Ltd.: Meeting of Creditors, 37  
Wulfsberg and Co.: Bankruptcy Proceedings, 269

Communism Analysed and Exposed, 236  
Compressed Gases, Notes on the Handling of, 592  
Confederation Life Association, The, 659

## Correspondence—

Anglo-American Unity, 5  
Borax Prices, 482  
Butters Nitrate Process, 284  
Chemical Manufacturers' Prices, 144  
Chemical Manufacturers' Quotations, 119  
Chemical Salesmanship, 119  
Chemical Societies' Work, 5  
"Chemist," The Title of, 309, 391, 459, 482  
Colloid Chemistry, 284  
Colour Makers, Making, 482  
Dyestuffs, Research into, 562  
Income Tax Deductions, 38, 483  
Industrial Welfare Society, 535  
Laboratory Porcelain Crucibles, 459  
Margarine, The Analysis of, 591  
Money from Ashes, 309  
Nitrates from the Air, 535  
Nitrogen Industry, The, 482  
Nitrogen Industry in France, 419  
Oil Fuel for Clay Drying, 703  
Oxygen, Industrial, 391  
Poison Gas as a Cure for Disease, 591  
Poisons, Colouring of, 119  
Property, Revaluation of, 562  
Ruhr and British Dyes, The, 175, 284  
Stainless Steel, 262  
Sulphate, Neutral, 309  
Titration, Accuracy of, 540  
Trade Names and Chemical Formulae, 364, 391  
Training for Industry too Academic?, 63  
"Unemployed," 108, 175  
What is a Chemist? 535  
Young Chemist, The Case of the, 118, 144

Corrosion Problems, Joint Conference on, 394  
Costing in Chemical Works, Methods of: F. M. Potter, 588, 612  
Crystal Analysis, New Methods of, 122

**D**

Department of Overseas Trade, Work of the, 341  
Detergent Action, Modern Theories of: T. Hedley Barry, 446  
Diazo Coupling Reactions, Mechanism of, 461  
Donnan, Professor F. G., 488, 534  
"Drug and Chemical Markets" Guide Book, 261  
Drugs and Poisons: the Chemistry of their Physiological Action, 141  
Dust Explosions in Industry, The Problem of: W. E. Gibbs, 54, 92  
Dyes, Coal Tar, 147  
Dyestuff, New, of the Indigo Series, 595  
Dyestuffs Acts, Opinions on the, 311, 341  
Dyestuffs Committee, New Members of the, 74  
Dyestuffs (Import Regulation) Act, 657  
Dyestuffs Industry, Progress and Prospects of the, 256  
Dyestuffs, Licences in, Applications for, 153, 411  
Dye Users and British Dyes, 232  
Dye Users and the Ruhr Occupation, 143

**E**

Earths, The Chemistry of the Rare, 694  
Economic and Financial Conditions in Germany, 564  
Edinburgh University, Technical Chemistry in, 392

**Editorial Articles—**

Acetylene Dangers, 137  
Acid Plant, A Combination, 25  
Activated Nitrogen, 558  
Advertising, A High Witness to, 52  
Air-Dried Peat, Production of, 688  
Alcohol from Trent Amalgams, 1  
Alkali Centenary, The, 24, 389, 415  
Aluminium, The Corrosion of, 302  
Applied Science Exhibition, An, 531  
Armstrong's, Dr., Address at Cambridge, 663  
Arsenic, Detection of, 3  
Association of British Chemical Manufacturers: Directory of Members, 53  
Baeyer, A Great Chemist, 530  
Britain's Chance in Chemicals, 223  
British Empire Exhibition, 327  
British Trade Expansion, 325  
Brunner Mond Jubilee, The, 663  
Budget Benefits, 417  
By-Product Coking Developments, 587  
Cambridge Meetings, The, 193, 505  
Carbon Monoxide, Tests for, 664  
Carpenter, Dr., Defends the Therm, 224  
Chemical Education and Training, 135  
Chemical Glassware Industry, The, 361  
Chemical Imports and Exports, 477  
Chemical Plant Exhibits at British Industries Fair, 25  
Chemical Salesmanship, 78  
Chemicals at the Fair, 191  
Chemist or Pharmacist, 278, 389  
Chemist, Training the Complete, 301  
Chemist in Industry, The, 136  
Chemistry in Agriculture, 77  
Chemists and Prohibition, 689  
Chemists Going Into Industry, 609  
Claude Process, Further Light on the, 359  
Coal, Quality Certificates for, 664  
Coal Costs, The Recent Increase in, 224  
Coal Industry, Conditions in the, 78  
Colloidal Clay Experiments, 165  
"Colour Index," A British, 636  
Colour Users and Dyestuffs, 665  
Concrete, Integral Waterproofings for, 529  
Cyanamide, The Problem of, 111  
Dewar, Sir James, 327  
Dyestuffs Committees, 53  
Electronic Theory of Valency, 558  
Endowment, Need for More Liberal, 585  
Ernest Benn, Ltd., 361  
Evaporation of Stored Liquids, 388  
Exhibitions, Forthcoming, 476  
Explosives, Annual Report on, 530

**Editorial Articles—continued**

Fluctuations in Makers' Prices, 113  
Food Value of Synthetic Fats, 444  
France and the Haber Process, 277  
French Views on British Trading Methods, 388  
German Apologia, A, 51  
German Chemicals, Rising Prices of, 225  
German Dyeworks, Seizure of, 531  
German-Owned Chemical Plants in U.S.A., 476  
German Potash and Nitrogen, 445  
"Germocca," 477  
Haslam, E. P., 193  
Hydrocyanic Acid, Disinfecting with, 387  
Industrial Oxygen, Research on, 635  
Industrial Poisoning, 253  
Insulin, Production of, 389  
Iron Production and the Coke Shortage, 360  
Isotopic Elements, 193  
Leaching, A Conference on, 164  
Manchester Referendum, A, 23  
Materials for Equipment Construction, 504  
Mercury, Industrial, Poisoning, 24  
Metallurgical Research, 476  
Metals, The Corrosion of, 417  
Money from Ashes, 278  
Mining Exhibition, The, 610  
Motor Spirit from Vegetable Oils, 610  
"National Fuel" for France, 416  
"National Physical Laboratory, 688  
Neutral Sulphate, Small Works and, 252  
Neutral Sulphate Difficulties, 136  
Newspaper Insurance, Goodbye to, 225  
Newspaper Press Fund Jubilee, 416  
Newspaper Production, Cost of, 559  
Nitrates, Export of, 504  
Oil and Sulphur Problem, 586  
Oils and Fats, The Chemistry of, 443  
Oxygen, Outstanding Work on, 326  
Pasteur, Louis, 587  
Power Alcohol Production, 303  
Preservatives in Food, 504  
Professor Bone's Combustion Theories, 557  
Professional Practice, Protecting, 3  
Publicity for Chemistry, 611  
Reinforced Concrete Problems, 192  
Royal Institution's Need of Funds, 476  
Ruhr Occupation, Effects of, 302  
Sampling of Chemicals, The, 112  
"Save the Surface," 2  
Silica Gel, Reactivation of, 610  
Smithell, Professor, Work of, 611  
S.C.I. Finance, 637  
Sulphate of Ammonia Output, 687  
Tanks for Transport of Acids, 416  
Tar Distillers' Programme, 192  
Technical Chemistry, Degrees in, 277, 387  
Therm, Judgment for the, 279  
Town's Gas Developments, 529, 505  
Unemployment Statistics, 163  
United Chemical Merchants, 503  
United States, Business Conditions in the, 586  
Vitamins, The Indefinite Role of, 164  
Water Gas Systems, Comparisons of, 636  
White Lead, The New Report on, 360  
Wireless Talks on Chemistry, 637  
World's Chemical Supplies, The, 359  
Young Chemist, The Case of the, 52

Egyptology, Application of Chemistry to, 19  
Electrical Trades Directory and Handbook, 235  
Electrolysis of Acetone Solutions of Potassium Chloro- and Tri-Chromates, 33  
Electrolytic Zinc Co. of Australasia, Ltd., Annual Meeting, 9  
Elimination of Waste, The, 641  
Emulsoids and Chemical Reactions, 281  
Enamelled Apparatus for Chemical Plant, 488  
English China Clays, Ltd., 500  
Evaporating and Leaching, Conference on, 168

**F**

Fade-Ometer, Testing by the, 9  
Faraday Society, 63, 394, 425, 460  
Fertilisers, Nitrogenous, The Present Position of: Dr. S. Williamson, 84  
Finance and Industrial Research, 43  
Fine Chemicals, British, Progress in, 167  
Fine Chemicals at the British Industries Fair, 116  
Flash-Point Temperatures of Oils, 32

Formaldehyde and Nitronaphthalenes, 236  
French Potash Industry, The, 87, 672  
Fuel from Ashes, Recovery of, 638  
Fur Dyeing, Modern Methods of, 483

**G**

Gas Examiners, Qualifications of, 60, 119  
Gaseous Combustion at High Pressures, 341  
Gases, Compressed, Notes on the Handling of, 592  
Gas Industry, Chemistry and the, 700  
German Potash Industry, 594  
German Potash and Nitrogen, 553  
German Nitrogen Industry, 146  
German (Reparation Recovery) Act, 148, 209  
Germany, Economical and Financial Conditions in, 564  
Glasgow Chemical Societies, 234  
Glass Industry, A Directory of the, 367  
Glass Trade, Wages in the, 463  
Glass Tubes, Manufacture of Accurate, 615  
Glycerin Producers, An Association of, 178  
Graute, Chemicals from, 591  
Government Training Grant Scheme, 20

**H**

"Hafnium," 148, 237, 393  
Hamburg Wax Market, 681  
Hardwood, Distillation of, in Canada, 674  
Heat-Resisting Glasses, Improvement in, 262  
Heat Transference, 282  
Hematite to Magnetite with Methane, Reducing, 38  
Hydrates of Calcium Sulphate, 237  
Hydrocarbons and Oils, Explosiveness of, 591  
Hydrogenated Oils, Industrial Uses of, 448

**I**

Imperial Institute, Work of the, 570  
Indian Indigo Cess Act, Abolition of, 209  
Industrial Oxygen, Research Work on, 642  
Industrial Poisoning and Works Chemists, 261  
INSTITUTE OF CHEMISTRY:  
Annual Meeting, 258  
Pass Lists, 122  
Edinburgh Section, 94  
Huddersfield Section, 122, 209  
Liverpool and North-West Section, 288  
North-Eastern Section, 461  
Institute of Metals, 32, 209, 285, 481  
Institution of Chemical Engineers, 120, 308, 642  
Institution of Engineering Inspection, 206, 539  
Institution of Petroleum Technologists, 32, 513

**INSTITUTION OF RUBBER INDUSTRY:**

London Section, 144  
Manchester Section, 97, 207  
Institution of Welding Engineers, An, 210  
Insulin, Manufacture of, 435, 460, 497, 551  
Irish Chemistry Students at Birmingham, 145  
Isotopes, The Origins of the Conception of, 509

**J**

John Cass, Sir, Technical Institute, 147

**K**

"Kynazite," Interesting Tests, 238

**L**

Lamp Black and Carbon Black, Production and Uses of: Rex Furness, 532  
Leaching and Evaporating, Conference on, 168  
Lead as a Material for Chemical Equipment, 709  
Leeds Chemistry Professorship, 426

**Legal Intelligence—**

Brandt and Co., Arthur H. v. River Plate Steam Navigation Co., Ltd., 513  
British Sulphate of Ammonia Federation v. Clan Line Steamers, Ltd., 220, 234  
Calvert, Jackson v. Henry Ellison, 144  
Colnbrook Chemical Co., The, 657  
Davis, W. H. D. v. Robinson Brothers, Ltd., 345  
Holder, Herbert N. v. John Baird and Co., 158  
Hull Municipal Hospital v. Major and Co., Ltd., 372  
Humphrey, Arthur J. and Henry Grey, jun., Ltd. v. Lever Brothers, Ltd., 488  
Michael, Morris v. Vulcan International Transport Co., 236  
Memon, Son and Co. v. British Danubian Trading Corporation, Ltd., 355  
Midgley, Charles, Ltd., v. Taylor's Drug Co., Ltd., 74, 122  
Moat, A. H. v. H. Vivian and Co., 627  
Overberg and Co. v. Taylor and Co., of New York, 123  
Taylor's Drug Co., Ltd. v. Veno Drug Co., 411  
Usher, Frederick v. Elephant Chemical Co., Ltd., 243  
Lever Brothers, Ltd., 442  
Lime as a Plant Production Factor, 86  
Lime in Agriculture, The Use of: N. V. S. Knibbs, 88  
Liquid Air Rectification Plants, 145  
Lithopone Manufacture in France, 655  
Low-Temperature Carbonisation, 400  
Low-Temperature Carbonisation, Ltd.: Annual Meeting, 20

**M**

M.G.C. Manchester 1923 Year Book, 286  
Margarine, The Analysis of: G. D. Eisdon, 450  
Mazuri Strainer, The Patent, 372  
McMullen, Colonel Joseph, 308  
Mesothorium, Extraction of, 38  
Metal Polishing and Grinding, 236  
Metallurgical Chemistry, Recent Advances in: Elaine Eustice, 26  
Metallurgical Coke, The Properties of, 372  
Methane from Water Gas, Production of, 678  
Methylated Spirit, New Prices for, 237  
Micro-Organisms, Industrial Applications of, 35  
Milk, The Chemistry of, 285  
Mineral Resources of the Empire, 96  
Mining Exhibition, 616, 671, 694  
Molecule, Structure and Behaviour of the, 619, 640  
Mond Nickel Process, Development of the, 646  
Molecular Structure, Theories of, 619  
Musparr, Sir Max, on Trade Conditions, 59

**N**

Naphthalene in Coal Gas, 121  
National Union of Scientific Workers, 60  
Necol Plastic Wood, 471  
Nicholls Medalist, The, 344  
Nitrate, Chilean v. Synthetic, 208  
Nitrate of Soda, Demand for, 36  
Nitrates from the Air, 401, 426, 459  
Nitrogen Industry in the United States, The, 6  
Nitrostat, 713  
Non-Ferrous Metals, Research into, 235  
Northern Polytechnic Chemical Association, 310  
Norway, Trade in, 567  
Norwegian Carbide Plant, Abandonment of, 534

## Obituary—

Alexander, James Young, 65  
Bell, Thomas, 99  
Black, George, 650  
Burt, Edwin W., 149  
Cotterill, John William, 123  
Cox, Arthur H., 11  
Fison, Dr. A. H., 149  
Goetz, Carl Paul, 65  
Hodges, James Hill, 179  
Holder, Sir John, 490  
Hülsem, Julius R. W., 544  
Leonard, Walter J. H., 179  
Lloyd, Frederick James, 188  
Lunge, Dr. George, 65  
Macdonald, Andrew, 99  
Miller, Thomas, 99  
Montgen, Professor W. K. von, 179  
Sadler, Robert, 11  
Ward, James Lawrence, 123  
Weston, F. E., 57

Oil and Colour Chemists' Association, 61, 176, 285, 486, 540  
Oil Fields in Texas, British Company's, 458  
Oil Hydrogenation, 365  
Oil Meter, A New, 695  
Oils, The Drying of, 61  
Olive Oil, The Manufacture of, 452  
Optical Society: Annual Exhibition, 8  
Ores, A Chemical Method of Working, 618  
Oxygen, Industrial, Research Work on, 642

Packing of Goods for Export, 340, 401  
Paint and Varnish Technology, 344  
Paints, The Chemistry of, 345  
Patents, Reflections on, 511

## Patent Specifications—

Acetone, 377  
Acetates, Cellulose, 598  
Acid Liquids, Evaporating, 599  
Alcohol, 152  
Alcohol, Absolute, 103, 378  
Alkali Cellulose, 548  
Alkali and Alumina from Leucite, etc., Extracting, 577  
Alkali Metal Cyanides, Production of, 68  
Alkali Thiosulphate, Manufacture of, 677  
Alkaline Earth Sulphides, 520  
Alloys, Ferro-Chromium, Manufacture of, 241  
Alpha-Naphthylamines, Manufacture of a series of Substituted, 213  
Alum, Chrome, 15  
Alumina, Pure, Manufacture of, 466, 546  
Aluminium Chloride, Recovery of, 182, 241  
Amido Phenol Compounds, 598  
Amino-sulphonic Acids, 152  
Ammonia, Synthetic Production of, 432  
Ammonia Synthesis, 69  
Ammonia, Catalytic Synthesis of, 350  
Ammonia, Recovering, from Gases, 293  
Ammonium Chloride, 626  
Ammonium Chloride Lyes, 677  
Anodes for Forming Percompounds, 707  
Anhydrous Metal Chlorides, Manufacture of, 102  
Arsenical Ores, Treatment of, 41  
Azo Compounds, Preparation of, 676  
Azo-Dyestuffs, Chromium Compounds of, 214  
Azo-Dyestuffs, Manufacture of, 152  
Barium Hydrate, 378  
Barium Oxide, Manufacture of, 151  
Bauxite, Extraction of Titanium Dioxide from, 14  
Beryllium, Compact Metallic, Manufacturing, 293  
Bleaching Liquor from Chlorine Gas, 599  
Butyl Chlorides, 214  
Carbazole Derivatives, 377  
Carbon, Activated, from Peat, etc., 706  
Carbonaceous Materials, Distillation of, 125  
Carbonaceous Materials, Treatment, 181, 292  
Carbonaceous Matter, Drying of, 376  
Caustic Soda, Manufacture of, 652  
Catalysts, particularly for Synthesis of Ammonia, 652  
Cellulose Acetates, 598  
Cellulose, Acetates, Dyeing, 68, 433

## Patent Specifications—continued

Cellulose Acetates, Treatment of, 68  
Cellulose Acetate Products, Treatment of, 376  
Cellulose, Acetylated, 125  
Cellulose, Ethers, Dyeing of, 625  
Cellulose from Wood, 268  
Cellulose Derivatives, Production of, 241  
Cellulose Ester Solutions, 127, 183  
Cellulose Materials, Chlorination of, 14  
Centrifugal Separators, 183, 268, 434, 708  
Charcoal, Active, 600  
Chlorine Derivatives, 494  
Chloro-ethyl-ester, Manufacture of, 349  
Chromate of Soda, Manufacture of, 625  
Chromium, Pure, Electrolytic Separation of, 677  
Classification of Mineral Particles, 464  
Coal, Carbonising, 317  
Coal, Distillation of, 518, 519, 676  
Coal Tar, Dehydration of, 575  
Coal Gases, Recovery of Products from, 67  
Colloidal Ferric Oxide, 577  
Colloidal Matter, Separation of, from Liquids, 464  
Colouring Matters, Production of, 348  
Copper Ores, 67  
Crushing Mills, 151  
Crushing and Grinding Mill, 547  
Crystalline Mineral Materials, Manufacture of, 315  
Crystals, Drying, 268  
Crystallising, 548  
Decolorising Carbon, 127  
Desulphurising Oil, 376  
Detergents and Bleaching Agents, 599  
Detergent Agents, Manufacture of, 546  
Dihydro-Isoquinoline, Manufacture of Derivatives of, 151  
Dioxyperylene, 269  
Disinfectants, Process for the Manufacture of, 267  
Disintegrators, 214  
Disintegrating machines, 151  
Distillation of Carbonaceous Materials, 267, 315  
Distillation of Coal, 518, 519, 676  
Distilling Apparatus, 707  
Distilling Oil Shale, 13  
Dormic Aldehyde, Solidifying, 349  
Drugs, Synthetic, 153, 215  
Dry-Grinding Solid Materials, 518  
Drying or Evaporating Surfaces for Drying Moist Material, 213  
Dyeing, Mixtures for Use in, 377  
Dyeing Textile Fabrics, 625  
Dyeing Wool, 69  
Dyes, 152, 466, 494, 600, 626, 676, 707  
Dyestuff Preparations for Household Use, 405  
Dyestuffs, Manufacture of New, 291  
Dyestuffs, Red Basic, 377  
Dyestuffs, New Ortho-Oxyazo, Manufacture of, 267  
Dyestuffs of the Triarylmethane Series, Manufacture of, 214  
Dyestuffs, Mordant, Manufacture of, 213  
Dyestuffs, Manufacture of, 41  
Electrodes Suitable for Electrolytic Cells, 404  
Electrolysis, 182, 317  
Electrolysing Fused Salts of Metals, 706  
Electrolytic Cells, 405  
Emulsions, 576  
Emulsions, Resolving Water-in-Oil, 520  
Emulsions, Production of, 181  
Endothermic Gas Reactions, Process for Carrying Out, 465  
Esters, Production of, 464  
Evaporating Acid Liquids, 599  
Exothermic Catalytic Reactions between Gases, 676  
Fat and Oil Splitting Reagents, 432  
Fats and Oils, 546, 652, 707  
Fatty Acid Anhydrides, 576  
Fatty Oils, Oxidising, 466  
Ferro-Phosphorous Acid, Production of, 182  
Fertiliser, Material suitable for, 291  
Fertilisers, 127, 377, 518  
Ferric Hydroxide, 576  
Filters, 67  
Filter Elements, 349  
Filtering Apparatus, 519  
Formaldehyde, 127  
Formaldehyde, Condensation Products of, 466  
Furils, Solid, Concentration of, 652  
Furnaces, Roasting, 433  
Furnaces, Tunnel, 600  
Gas or Air Washers or Scrubbers, 405  
Gas Generators, 101, 624  
Gas Washers, etc., 518  
Gas, Water, Methanation of, 546  
Gaseous Mixtures, Separation of, 102, 126, 377, 600, 626

## Patent Specifications—continued

Gases, Drying, 101  
Gases, Absorbing and Recovering, 215  
Gases and Vapours, Fractional Separation of, 652  
Gases, Liquefying, 600  
Gases from Vapours, Means for Removing, 598  
Gas Producers, 350  
Gases, Washing and Scrubbing of, 405  
Gases, Drying and Separating, 102  
Gases, Treating, 152  
Gases, Purifying, 152, 153, 182, 576  
Glycerin Soap, 677  
Grinding Material, Conveyance of, 310  
Grinding Machines, 151  
Grinding Mills, 151  
Grinding or Crushing Mills, 405  
Gums, Treatment of, 42  
Heat Treatment by Molten Metal, 268  
Hexamethylene-Tetramine, 625  
Hydrazo-Benzol and Homologues, Deriving, 349  
Hydrocarbons, 68, 102, 125, 183, 242, 291, 315, 348, 376, 464, 494, 575, 576, 625, 652, 653, 654  
Hydrochloric Acid, 14, 653  
Hydrocyanic Acid from Gases, 126  
Hydrogen, Manufacture of, 519  
Hypochlorites, Basic Calcium, 101  
Hypochlorites and Hypochlorous Acid, 599  
Indiarubber, Vulcanising, 243  
Inks, Manufacture of, 707  
Insecticidal and Fungicidal Preparations, Manufacture of, 546  
Intermediate Products for Dyestuffs, Manufacture of, 493  
Iron, Process for Manufacture of, 214  
Isomethanol, 127  
Latex, Treatment of, 181  
Lead Monoxide, 103  
Lead Oxide, 126  
Lead Oxide, Production of, 182  
Lead Oxide, Manufacture of, 125  
Lime, Hydration of, 242  
Liquid Fuel, 653  
Liquids, Concentrating, 518  
Liquids, Treating, with Gases, 102, 378  
Liquids, Treating with Chemical Reagents, 213  
Liquids, Purifying, 152  
Liquid into Contact with Gases, Apparatus for Bringing, 151  
Lithopone, Production of, 15  
Lithopone, Manufacture of, 13  
Lixiviating Apparatus, Mechanically Acting, 624  
Magnesium Carbonate, 547  
Manure, Manufacture of, 151  
Methane, Chlorination of, 577  
Mica, Plastic Masses from, 348  
Mineral Oil, Cracking, to Produce Gasoline, 707  
Mineral Oils, Treatment of, 376  
Mineral Oils and Spirits, Desulphurising, 599  
Monazite Ores, Treatment of, 14  
Mond Gas Process, Recovery of the Sensible Heat of Gases in, 492  
Metaldehyde, Manufacture of, 126  
Metals from their Solutions, Recovering, 404  
Metals contained in Ores, Recovering, 404  
Menthol, 127  
Menthone, 127  
Minerals, Separation of, 42  
Nitrate, Papaverine, Preparation of, 242  
Nitrocellulose, Treating, 548  
Nitrogen, Atmospheric, Recovery of, Fixed, 575  
Nitrogen, Atmospheric, Fixation of, 291  
Nitrogen, Fixation of, 213, 377  
Nitrogen Oxides, 653  
Oils, Low Boiling, Manufacture of, 315  
Oil and Waxes, Refining, 548  
Oils, Cracking, 653  
Oils, Mineral, and Spirits, Desulphurising, 599  
Oils, Purifying, 433  
Oils, Refining of, 706  
Ore Briquettes, Making, 652  
Ores, Concentrating, 520  
Ores, Gold and Silver Bearing Antimony, Treatment of, 493  
Ores, Phosphate, Treatment of, 14  
Ores, Treatment, 69, 267, 348, 433  
Organic Mercury Derivatives of Aurin Tricarboxylic Acid, etc., 576  
Organic Compounds, Chlorination of, 316  
Organo-Arsenic Compounds, 215  
Oxygen, Separating, from Atmospheric Air, 292  
Paints, Manufacture of, 492, 546, 707  
Para-aminophenol, 548  
Petroleum, Distilling, 708  
Petroleum, Refining, 652

## Patent Specifications—continued

Phenol-formaldehyde condensation products, 292  
Phenol and Formaldehyde, Manufacture of Resinous Products of Condensation from, 181  
1-Phenylimino-2-Naphthoquinone, 242  
Phosphoric Acid, Production of, 182  
Phosphorus Pentoxide, Manufacture of, 676  
Pigments, Manufacture of, 492  
Plastic Compositions, 493  
Plastic Compositions having a Basis of Cellulose Ester, 241  
Plastic Materials, Manufacture of, 241  
Pulverising Machines, 101  
Reactions, Chemical, Process and Furnaces for, at High Temperatures, 598  
Resins, 42, 653  
Retorts, Horizontal and Inclined, 576  
Rubber, Manufacture of, 349  
Rubber, Treatment of, 101  
Rubber, Vulcanisation of, 42  
Salts, Crystallising, 600  
Salts of 1:3-Dinitro-4:5-Dinitro-Benzene, Manufacture of, 125  
Superphosphates, Manufacture of, 151  
Separation of Minerals, 42, 624  
Silk, Artificial, 103  
Soaps, 547  
Sodium Diethyl Barbituric Acid and Phenyl-Ethyl Barbituric Acid, Compounds of, 68  
Sodium Nitrate, 69, 317  
Solid Substances, Finely Subdivided, 14  
Starch, 43  
Sugar, Clarification of, 432  
Sugar, Extraction of, 68  
Sulphate of Ammonia, Drying and Neutralising, 547  
Sulphate of Ammonia, 406, 676  
Sulphate of Lead Water Paste, Conversion of, into Oil Paste, 214  
Sulphur Burning, 317, 676  
Sulphuretted Hydrogen, 153  
Sulphuric Acid, 653  
Sulphurising Organic Compounds, 624  
Sulphur Lubricant, 69  
Sulphur Protocloride, Manufacture of, 181  
Tanning, 432  
Tanning Agent, 576  
Tanning Extracts, Manufacture of, 41  
Tar, Distillation of, 152  
Tars, Hydrocarbon, 125  
Thymol, Manufacture of, 676  
Tin, Refining, 708  
Titanium Dioxide from Bauxite, Extraction of, 14  
Titanium Pigments, Producing, 465  
Tungsten Compounds from Tungsten Ore, Production of, 41  
Tungstic Oxide, Production of, 101  
Urea, 127, 707  
Vanadium-containing Materials, Process of Reducing, 518  
Vapours, Recovering Gases from, 598  
Vat Dyestuffs Derived from Anthraquinone, Manufacture of, 519, 707  
Viscose, Manufacture and Production of, 493  
Waste Liquors, Treating certain, 182  
Wood, Softening, 493  
Zinc, Extracting, 577  
Zirconium Alloys, Making, 653  
Patents for Chemical Products, 33  
Perkin Medal for American Chemist, The, 10, 98  
Phosphate Beds in Morocco, 368  
Phosphorus, The Oxidation of, 683  
Photo-Synthesis of Plant Products, 172  
Physical Society of London: 13th Annual Exhibition, 8  
Physics and Sewage Disposal, 399  
Pieric Acid, 649  
Pigments in Rubber, The Use of, 398  
Plant Pests, Chemical Treatment of, 89  
Plant Pigments, Chemistry of, 122  
Plant Products, Photo-Synthesis of, 172  
Plaster of Paris, 237  
Poison Gas in War, 384  
Poison Gas as a Cure for Disease, 537, 591  
Poisons, Proposed Colouring of, 497  
Potash and Rare Metals from Oil Shales, 488  
Potash Industry in Germany, 594  
Potash, Notes on the Fertilising Effects of: G. A. Cowie, 85  
Potassium Chloride in Explosives, 716  
Powders, The Physical Properties of, 460  
Power Alcohol from Calcium Carbide: Rex Furness, 280, 304  
"Premier" Mill in Chemical Industry, The, 329  
"Problem of Solution," The, 283  
Preservative Materials for the Chemical Industry, 568  
Pulverised Fuel, The Use of, 397



## R

- "Ransome" Electric Runabout Crane, 173  
Rare Earths, The Chemistry of the, 604  
Reparation Dyes in India, Disposal of, 10  
Research Laboratory, A New, 243

## Reviews—

- Allotropy, The Theory of (Dr. J. S. Thomas), 140  
Applied Chemistry, Dictionary of (Sir Edward Thorpe), 170  
Atoms (J. Perrin), 364  
Atoms, The Structure of (A. Stock), 335  
Briquetting (A. L. Stillman), 333  
Chemical Technology of Oils, Fats, and Waxes (Dr. J. Lewkowitch), 335  
Chemist's Year Book, The, 335  
Chemistry, A First Book in, (R. H. Bradbury), 335  
Chemistry of To-day (P. G. B.), 140  
Cours de Chimie Organique (F. Swarts), 171  
Dental Materials, The Chemistry of (Professor G. S. Gibson), 171  
Destructive Distillation of Wood, The (H. M. Bunbury), 480  
Dyestuffs Derived from Pyridine, Quinoline, Acridine, and Xanthene (J. T. Hewitt), 141  
Elements of Glass Blowing (H. P. Waran), 481  
Emulsions and Emulsification, The Theory of (W. Clayton), 333  
Flavouring Materials—Natural and Synthetic (A. Clarke), 333  
Generation and Utilisation of Cold, The, 364  
Industrial Organic Chemistry (S. P. Sadler), 364  
Inorganic Chemistry (G. S. Newth), 335  
Method for the Identification of Pure Organic Compounds, A (S. P. Mulliken), 335  
Modern Gasworks Chemistry (Geoffrey Weyman), 171  
Nitrogen Industry, The (J. R. Partington), 334  
Optical Methods in Control and Research Laboratories (J. N. Goldsmith), 335  
Organic Chemistry, Theories of (Dr. F. Henrich), 141  
Organic Synthesis (J. B. Conant), 335  
Phase Rule and Its Applications, The (A. Findlay), 364

## Reviews—continued

- Quantitative Chemical Analysis (A. C. Cumming and S. A. Kay), 170  
Recovery of Volatile Solvents, The (Clark Shove Robinson), 481  
Researches on Cellulose (C. F. Cross and C. Dorée), 4  
Richter's Organic Chemistry, 335  
Second Year College Chemistry and Manual of Laboratory Exercises (W. H. Chapin), 481  
Surface Tension and Surface Energy (R. S. Willows and E. Hatschek), 481  
Tables Annuelles de Constantes et Données Numériques, 2  
Tested Method of Laboratory Organisation, A (Seymour Pile), 481  
Theoretical Chemistry, Outlines of (F. Getman), 335  
Vat Colours (J. F. Thorpe and C. K. Ingold), 480  
Vital Factors of Foods: Vitamins and Nutrition (Carleton Ellis and Annie L. MacLeod), 480  
Road Tar Specification, 209  
Rosin and Turpentine in 1922, 206  
Royal Institution, 172, 489, 541  
Royal Society of Arts, 122, 147, 177, 205, 262, 401, 459  
Rubber Industry, Technology in the, 144  
Rubber, Vulcanisation of, 147, 177, 205  
Rubber Accelerators, New, 176  
Rubber Latex Precipitates and Dispersions, 328  
Ruhr Occupation and Dye Users, 143, 263  
Russia, Trade Concessions in, 569  
Russia, Position of the Chemical Industries of, 484  
  
S  
SAFEGUARDING OF INDUSTRIES ACT:—  
Exemptions from duty, 235  
Formaldehyde, Complaint against, 210, 669, 702  
Manchester Traders and, 9, 28  
Rochelle Salts, Complaint against, 210  
Salt Trade Prospects Satisfactory, 371  
Scientific Periodicals, List of, 263  
Sewage Treatment by Bio-eration, 287  
Science in Public Affairs, 132  
Science on Human Life, The Influence of: A. R. Tankard, 390, 418

- Scientific Instruments, 8  
Scientific Expeditionary Research Association, A, 64  
"Sentinel" Waggon, 427  
Shipping Conditions, Two Reports on, 574  
Sicilian Sulphur Industry, 369  
Silica Dust Danger, Committee to Investigate, 210  
Silvanus Thompson Memorial Lecture, 63  
Smoke Prevention, A Practical Demonstration of, 515  
Soapworkers' Strike in London, 48, 76, 108  
Society of Glass Technology, 563  
SOCIETY OF CHEMICAL INDUSTRY:—  
Annual Meeting at Cambridge, 697, 674  
Birmingham Section, 74, 236, 281, 365, 399, 426  
Bristol Section, 262  
Chemical Engineering Group, 282  
Edinburgh Section, 94, 269  
Glasgow Section, 263  
London Section, 35, 145, 261, 396, 510, 619  
Manchester and Liverpool Sections, 33, 98, 146, 259, 396, 511  
Newcastle Section, 121  
Nottingham Section, 345, 479  
SOCIETY OF DYERS AND COLOURISTS:—  
London Section, 284, 306, 483  
Manchester Section, 95, 461  
Midland Section, 132  
Scottish Section, 63  
Society of Public Analysts, 148, 177, 286, 393, 508  
Sodium Thiosulphate, A New Process for the Manufacture of, 146  
Solvents, The Recovery of, 207  
"Stainless Steel" in the Chemical Industry, 590  
Stainless Steel and Iron, 425  
Stainless Steel, 235  
Steam Generation, 63  
Stirling Stove, The, 367  
Sulphate of Ammonia, Neutral, Difficulties, 254  
Sulphate of Ammonia Prices, 141  
Sulphates, Volumetric, Estimation of, 674  
Sulphur Dioxide Leaching, Precipitation and Flotation, 263  
Sulphur Industry of the World, The, 369  
Sulphuric Acid Chambers, The History of Vold Tower: P. Parrish, 692  
Sulphuric Acid in India, 608  
Sulphuric Acid Plant Improvements, 120  
Sulphuric Acid and Ferric Sulphate Solutions, 373

- Sulphuric Acid Process, New American, 95  
Superphosphate Industry, Crisis in the, 350  
Superphosphate, Recent Developments in the Manufacture of: Alexander Ogilvie, 690

## T

- Tannin Materials, The Leaching of, 506  
Tantalum, Properties and Uses of, 489  
Tar Still Manufactures, 353  
Technical Chemistry in Edinburgh University, 392  
Titanic Acid, 95  
Titanium White, A Use for, 553  
Titanium, Its Uses, Properties and Sources of Supply, 331  
Trade and Industry in Germany, 310  
Trade Returns, 62, 174, 286, 487, 543, 668  
Tully Gas Developments, 538  
Turpentine and Rosin in 1922, 206  
Turpentine Substitute, Disadvantages of, 673

## U

- United Alkali Co., The Centenary of the, 29, 409, 421  
United Premier Oil and Cake Co., 371  
"Universal Gas Mask," A, 542  
University of Birmingham Chemical Society, 96, 141  
Use of the Title "Chemist," 175

## V

- Vacuum Device, A Simple Regenerative, 515  
Valency, New Theories of: Dr. E. B. R. Prideaux, 138  
Valuation of Dyestuffs by Titration Methods, 284  
Viscometry and Plasmometry, 176, 285  
Vold Tower Sulphuric Acid Chambers, The History of: P. Parrish, 692  
Volumetric Analysis, Accuracy in, 478

## W

- Waste, The Elimination of, 641  
"Westminster Bank, Ltd.," 158, 208  
White Lead, Manufacture of, 344  
Wood Distillation, Experiments in, 378  
Wood Extracts, Manufacture of, 37  
World's Chemical Supplies, The, 366

## X

- X-Rays and Crystal Structure, 209

